



Comparison of Death Anxiety, Death Obsession, and Humor Among Nurses Working in Medical-Surgical Departments and Intensive Care Units

Mansour Arab¹, Seyed Hamid Seyed Bagheri^{2,3,*}, Ahmadrza Sayadi⁴ and Nabiollah Heydarpour⁵

¹Zeinab School of Nursing and Midwifery, Bam University of Medical Sciences, Bam, Iran

²Non-Communicable Diseases Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran

³Department of Pediatric Nursing, Nursing and Midwifery School, Rafsanjan University of Medical Sciences, Rafsanjan, Iran

⁴Department of Social Determinants of Health Research, Rafsanjan University of Medical Science, Rafsanjan, Iran

⁵Sirjan Emergency Department, Kerman University of Medical Sciences, Kerman, Iran

*Corresponding author: Department of Pediatric Nursing, Nursing and Midwifery School, Rafsanjan University of Medical Sciences, Rafsanjan, Iran. Email: hamidsiba@gmail.com

Received 2018 November 14; Revised 2018 December 24; Accepted 2019 January 02.

Abstract

Background: Death anxiety and obsession are human tensions that routinely present in nursing. The sense of humor is also associated with obsession and anxiety.

Objectives: Therefore, the present study aimed to determine the level of death anxiety, death obsession, and sense of humor among nurses working in medical-surgical wards and intensive care units in Iran. This is a descriptive-analytical study.

Methods: The research population comprised 240 nurses working in intensive care units and medical-surgical departments in Kerman. The research instrument was composed of a demographic questionnaire, death obsession scale (DOS), Templer death anxiety scale (TDAS), and humor styles questionnaire (HSQ).

Results: The mean scores of nurse's death anxiety in intensive care units and medical-surgical wards were 7.46 ± 3.43 and 5.46 ± 2.84 , respectively. The mean scores of death obsession in intensive care units and medical-surgical wards were 30.47 ± 11.17 and 26.38 ± 11.67 , respectively. The mean scores of the sense of humor in the two groups were 117.37 ± 21.31 and 109.56 ± 23.47 , respectively. The mean scores of death anxiety, death obsession, and sense of humor among nurses were significantly higher in intensive care units than in medical-surgical wards ($P < 0.05$).

Conclusions: It is necessary to determine the sources of death anxiety and obsession and strengthen the sense of humor in nurses to provide better healthcare.

Keywords: Death Anxiety, Death Obsession, Humor, Nurse

1. Background

Death is an unavoidable biological reality. Most people are frightened and timid when thinking about it and thus, prefer to ignore it (1). However, certain groups in the community, especially the healthcare groups, are more in touch with this phenomenon. The high level of healthcare team contact with the injured and patients makes them anxious (2). Some people talk about death, but there are also many people who avoid it and experience death anxiety (3). Death anxiety is a multidimensional concept with emotional, cognitive, and empirical characteristics and it is inversely related to the culture (4). In recent years, extensive studies have revealed the higher level of death anxiety among nurses than in other staff and stated that being at

the bedside of the patient, being accessible to the patient, and having a supporting role would increase the death anxiety in nurses (5). Nurses' death anxiety can negatively affect their performance and disturb nurses' communication with patients (2). Being in stressful environments, situations, and conflicts increases the death obsession in individuals. Death obsession includes repeated, persistent, intrusive thoughts and desires that arise about the death of self or his relatives (6). The constant remembrance and thoughts of death can lead to extraordinary anxiety in people (7). Death obsession and anxiety are affected by various factors, such as the sense of humor in the patients and coworkers. Humor is a survival skill to escape from problems and refers to the quality of action, speech, and writing (8). The results of a recent study showed a negative signif-

icant relationship between anxiety, obsession, and humor (9). Humor helps improve the nurse-patient relationship and creates a sense of wellbeing and happiness (10), which are useful in the communication between the patient and nurse (11). Therefore, patients believe that the sense of humor in nurses is a positive characteristic in them (2).

In a study by Mawdsley et al., comedy films reduced students' anxiety (9). In research conducted by Boerner et al., the sense of humor was negatively associated with emotion regulation difficulties and negative changes and it was useful to cope with trauma (12). Aghajani et al. stated nurses in intensive care units had more death anxiety than nurses in general departments (13). Despite the death anxiety in all nurses, nurses who work in intensive care unit, psychiatric, and emergency departments may become more anxious due to working in specific environments and contacting with malignant patients (14). We could not find any study that had compared these three phenomena in a unique study in nurses who worked in medical-surgical wards and intensive care units.

2. Objectives

Death anxiety, obsession, and their incidence in special professions such as nursing are high, and this matter affects the care provided by them. In addition, the effect of different environments and type of ward on the incidence of death anxiety and obsession makes it necessary to measure the differences in such cases in various departments of a hospital. In addition, according to recent studies and the effect of humor on mental health issues of nurses, the current study aimed to determine and compare the rate of death anxiety, death obsession, and humor in nurses working in medical-surgical wards and intensive care units of hospitals affiliated to Kerman University of Medical Sciences.

3. Methods

3.1. Study Type and Setting

The current study was conducted cross-sectionally. All nurses working in intensive care units and medical-surgical departments in teaching hospitals of Kerman University of Medical Sciences in Iran were studied during 2016-2017.

3.2. Sample Size and Sampling

According to a previous study (15) ($\mu_1 = 28.39$, $\mu_2 = 29.11$, $\delta_1^2 = 3.36$, $\delta_2^2 = 4/0.9$) with a 95% confidence coefficient, 1.96% confidence interval, and the second type error of 20%,

the sample size was estimated to be 113 for each group. Regarding the probability of dropout, 120 subjects were selected in each group. In total, 240 eligible nurses were selected and studied through the convenience sampling method.

3.3. Data Gathering Tools

The data-gathering tool was a four-part questionnaire including demographic information, death obsession scale, death anxiety, and humor styles questionnaire. The first part included demographic information. The patients' characteristics included age, sex, education, being religious or not, a history of care for malignancy during the past six months, work experience, type of department, marital status, and willingness to cooperate (despite the confidentiality of research information).

3.3.1. Death Obsession Scale

Abdul Khaleq (1998) developed this scale. This questionnaire contains 15 items and three subscales including death rumination (eight items), death domination (four items), and repeated beliefs related to death (three items). It is scored based on the Likert scale from one (never) to five (very high). The range of total score is from 15 to 75. The developers of this scale reported the internal consistency coefficient of the scale and its subscales to be 0.90 or higher. The validity of death obsession scale (DOS) has been confirmed as concurrent validity through the calculation of the correlation coefficient with similar scales (16). In Iran, Mohammadzadeh and Najafi confirmed the scale validity by factor analysis and the reliability by retesting, bisection, and internal consistency coefficient (17).

3.3.2. Templer Death Anxiety Scale

This scale was developed in 1970 and used to measure nurses' death anxiety. This questionnaire contains 15 items with yes or no answers. The answer "Yes" indicates anxiety of a person and takes the score of one, and the answer "No" is scored zero. The total score ranges from 0 to 15 (18). The validity and reliability of this scale have been investigated by Cronbach's alpha in various studies and have been confirmed with values between 0.73 and 0.87 (19). In Iran, Nia et al. confirmed the scale validity by the convergent and divergent methods and the reliability of the scale was calculated to be 0.88 using Cronbach's alpha (2).

3.3.3. Humor Styles Questionnaire

This questionnaire was developed by Martin et al. in 2003 and used to measure the humor level of nurses. This questionnaire consists of 32 items scored on a seven-point Likert scale from totally disagree = 1 to totally agree = 7 to

measure the four humor styles (eight items for each style) including affiliative, self-enhancing, aggressive, and self-defeating humor. The total score ranges from 32 to 224. A high score in each subscale indicates more humor in that style (7). The developers tested the reliability of the four subscales with a sample of 1195 individuals and reported a strong internal consistency for all four styles so that Cronbach's alpha coefficients were 0.80, 0.81, 0.77, and 0.80 for affiliative, self-enhancing, aggressive, and self-defeating humor, respectively. Its validity has been studied through the simultaneous implementation of the available questionnaires in the field of humor, and it was reported to be appropriate (7). Alinia et al. translated the questionnaire into Persian, and its validity and reliability were evaluated. Based on the results of the study, after three weeks, the re-test validity was 0.74, 0.75, 0.58, and 0.56 for affiliative, self-enhancing, aggressive, and self-defeating styles, respectively, and Cronbach's alpha was 0.77, 0.78, 0.54, 0.0, and 0.68, respectively (20).

3.4. Data Collection and Analysis

After obtaining necessary permissions, the researcher referred to the study setting and started sampling after taking permission from the heads of Afzalipour, Bahonar, and Shafa hospitals in Kerman and referring to the nursing offices of the mentioned hospitals. At the beginning of the morning shift, the questionnaires were given to the head nurses of the medical-surgical wards and intensive care units to be delivered to the nurses. In the next day, the researcher went to the head nurse to take the completed questionnaires. The inclusion criteria were at least a six-month work experience in the hospital, willingness to participate in research, and a BS or higher degree. Incomplete questionnaires were also excluded from the study.

SPSS version 20 was used to investigate the research objectives. Descriptive statistics (number, percentage, mean, and standard deviation) were used to describe the characteristics of the samples and the mean scores of death anxiety, death obsession, and humor. The independent *t*-test was used to compare the means of variables in two groups of nurses. Regarding the objectives, if parametric conditions were established, Pearson, independent *t*, and ANOVA tests would be used to examine the relationship between underlying information and these variables based on the type of underlying information (continuous quantitative, qualitative with two levels, qualitative with more than two levels).

3.5. Ethical Considerations

The current research was conducted by obtaining the ethical code No. IR.KMU.REC.1395.566 from Kerman University of Medical Sciences. The Research Deputy of Kerman

University of Medical Sciences funded this study. Some explanations were made concerning the optional inclusion and withdrawal of subjects. In addition, the nurses were assured that the collected information was confidential and would be used only for research and provision of better strategies.

4. Results

The mean age of the ICU nurses participating in research was 35.66 ± 7.14 , and the mean age of medical-surgical nurses was 31.48 ± 7.04 . 97.5% of the ICU nurses and 85.2% of the medical-surgical nurses were female. Other demographic characteristics are listed in [Table 1](#).

The results showed that the mean score of death anxiety was 7.46 ± 3.43 among ICU nurses and 5.46 ± 2.84 among medical-surgical nurses. The mean score of death obsession was 30.47 ± 11.17 in ICU nurses and 26.38 ± 11.67 in medical-surgical nurses. Meanwhile, the mean score of humor was 117.37 ± 21.31 in ICU nurses and 109.56 ± 23.47 among medical-surgical nurses. The mean scores of death anxiety, death obsession, and humor were significantly higher in ICU nurses than in medical-surgical nurses ([Table 2](#)).

Among the underlying variables, there was no significant difference between the death anxiety scores of ICU and medical-surgical nurses ($P > 0.05$) ([Table 3](#)).

In intensive care units, the mean score of humor was 124.87 ± 17.95 in single nurses and 114.82 ± 21.85 in married nurses. The difference in the mean scores of humor between the two groups was significant ($P = 0.02$). In addition, head nurses' humor scores were significantly higher than that of the regular nurses. The mean scores of humor were significantly higher in ICU nurses with a maximum of ten-year work experience (123.54 ± 21.27) than in nurses with over ten-year work experience (111.61 ± 19.83) ($P = 0.002$). In addition, in the medical-surgical departments, the mean score of humor was not significantly related to the demographic characteristics ($P > 0.05$) ([Table 4](#)).

According to [Table 5](#), there was no significant difference between ICU and medical-surgical nurses in the mean score of death obsession based on the demographic characteristics.

There was a significant correlation between death anxiety and death obsession among nurses in intensive care units and medical-surgical departments ($P < 0.001$); in other words, with an increase in death anxiety, the death obsession also increased, and vice versa ($r = 0.45$ and $r = 0.37$, respectively). There was a significant relationship between death anxiety and humor in the intensive care units nurses ($P = 0.002$) so that with an increase in death anxiety, humor increased and vice versa ($r = 0.29$). This relationship

Table 1. Baseline Characteristics of Participants^a

| Variable | ICU Nurses Group | Medical-Surgical Nurses Group |
|---|------------------|-------------------------------|
| Work experience in the current department, y | 6.76 ± 4.62 | 4.47 ± 4.63 |
| Work experience, y | 11.03 ± 6.84 | 7.79 ± 7.58 |
| Position | | |
| Regular nurse | 108 (91.5) | 122 (100) |
| Head nurse | 10 (8.5) | 0 (0) |
| Work experience in the current department, y | | |
| ≤ 10 | 97 (82.2) | 115 (94.3) |
| > 10 | 21 (17.8) | 7 (5.7) |
| Work experience, y | | |
| ≤ 10 | 57 (48.3) | 85 (69.7) |
| > 10 | 61 (51.7) | 37 (30.3) |
| History of neuropsychiatric disease | | |
| Yes | 14 (11.86) | 0 (0) |
| No | 104 (88.14) | 122 (100) |
| Death of a close relative in the last six months | | |
| Yes | 5 (4.24) | 18 (14.75) |
| No | 113 (95.76) | 104 (85.25) |

^aValues are expressed as mean ± SD or frequency (%).

Table 2. The Mean Scores of Death Anxiety, Death Obsession, and Humor in ICU and Medical-Surgical Nurses^a

| Variable | ICU Nurses Group | Medical-Surgical Nurse Group | Independent-t-Test | P Value |
|------------------------|------------------|------------------------------|--------------------|---------|
| Death anxiety | 7.46 ± 3.43 | 5.46 ± 2.84 | - 4.9 | < 0.001 |
| Death obsession | 30.47 ± 11.17 | 26.38 ± 11.67 | - 2.77 | 0.006 |
| Humor | 117.37 ± 21.31 | 109.56 ± 23.47 | - 2.7 | 0.008 |

^aValues are expressed as mean ± SD.

was not significant in medical-surgical nurses ($P = 0.36$). There was no significant correlation between death obsession and humor in the intensive care unit and medical-surgical nurses ($P = 0.17$ and $P = 0.64$, respectively) (Table 6).

5. Discussion

The results of the current study showed that the mean and standard deviation of death anxiety were 7.46 ± 3.43 among ICU nurses and 5.46 ± 2.84 among medical-surgical nurses. The results were consistent with the results of Dadfar and Lester (21) and inconsistent with the results of Rohi et al. (14). In addition, the mean death anxiety score of ICU nurses was significantly higher than that of the medical-surgical nurses, which is consistent with the results of Kim and Yong (22) and inconsistent with the results of Naderi et al. (23) and Dadfar and Lester (21). In

the study by Naderi et al., female nurses in the operating room and emergency departments had the highest and lowest mean scores of death anxiety, respectively, in comparison with nurses in medical-surgical departments, intensive care units, nephrology, surgery, internal operating room, and pediatrics (23). In the research results of Dadfar and Lester, there was no significant difference between nurses and employees in death anxiety (21). The reason for such contradictions can be the gender difference of the sample, the type of study departments, and the difference in the attitude of the healthcare team towards death, life, and their personal and professional conditions.

The results of studies show that death anxiety is one of the human tensions that exist routinely in some occupations, including nursing. The nature of the nursing profession makes nurses anxious because they are exposing to illness, trauma, violence, and death (23, 24). Despite the death anxiety in all nurses, nurses who take care of patients

Table 3. Comparison of Death Anxiety Between Medical-Surgical and ICU Nurses Based on Demographic Characteristics^a

| Variable | ICU | Statistical Test and P Value | | Medical-surgical | Statistical Test and P Value | | |
|---|-------------|------------------------------|------|------------------|------------------------------|------|----------------|
| | | T ^b | P | | T ^b | P | Z ^c |
| Age, y | | 0.34 | 0.73 | | 1.35 | 0.18 | |
| 22 - 40 | 7.53 ± 3.96 | | | 5.59 ± 2.73 | | | |
| > 40 | 7.29 ± 2.95 | | | 4.53 ± 3.52 | | | |
| Sex | | -0.23 | 0.82 | | -1.65 | 0.1 | |
| Female | 7.46 ± 3.48 | | | 4.44 ± 3.09 | | | |
| Male | 7 ± 1 | | | 5.63 ± 2.77 | | | |
| Maritalstatus | | -1.47 | 0.18 | | -0.62 | 0.54 | |
| Single | 6.67 ± 3.84 | | | 5.27 ± 2.32 | | | |
| Married | 7.73 ± 3.27 | | | 5.59 ± 3.15 | | | |
| Education | | 0.62 | 0.54 | | | 0.59 | -0.57 |
| Associate degree | 8.5 ± 2.38 | | | 6.0 ± 0.0 | | | |
| BS and higher | 7.42 ± 3.47 | | | 5.44 ± 2.88 | | | |
| Position | | 1.94 | 0.17 | | | | |
| Regular nurse | 7.33 ± 3.47 | | | - | | | |
| Head nurse | 8.9 ± 2.8 | | | - | | | |
| Work experience in the current department, y | | -1.58 | 0.12 | | -0.11 | 0.92 | |
| ≤ 10 | 7.23 ± 3.46 | | | 5.45 ± 2.9 | | | |
| > 20 | 8.52 ± 3.14 | | | 5.57 ± 1.72 | | | |
| Work experience, y | | 0.16 | 0.88 | | 1.11 | 0.27 | |
| ≤ 10 | 7.51 ± 3.54 | | | 5.65 ± 2.62 | | | |
| > 10 | 7.41 ± 3.36 | | | 5.03 ± 3.3 | | | |
| Neuropsychiatric disease | | 0.3 | 0.77 | | | | |
| Yes | 7.72 ± 3.47 | | | - | | | |
| No | 7.42 ± 3.44 | | | - | | | |
| Death of a close relative during the last six months | | -0.04 | 0.97 | | 1.42 | 0.16 | |
| Yes | 7.4 ± 3.21 | | | 6.33 ± 3.14 | | | |
| No | 7.46 ± 3.46 | | | 5.31 ± 2.77 | | | |

^aValues are expressed as mean ± SD.^bIndependent t-test.^cMann-Whitney U test.

in departments such as the intensive care unit, psychiatric, and the emergency departments, may experience this type of anxiety more severely due to working in special environments and contacting with malignant patients (14, 24).

The results of the current study showed that the mean and standard deviation of death obsession were 30.47 ± 11.17 in ICU nurses and 26.38 ± 11.67 in medical-surgical nurses. The results were consistent with the results of Dadfar and Lester (21) and Mahmoodzadeh and Najafi (17). In addition, the mean death obsession score of

ICU nurses was significantly higher than that of medical-surgical nurses. The result is consistent with the results of Abdel-khalek (25), Abdel-Khalek and Lester (26), Mohamadzadeh and Najafi (27) and Abdel-khalek (28) and inconsistent with the results of Dadfar and Lester (21). In the results of the latter study, there was no significant difference between nurses and employees in death obsession (21). The reason for this difference can be a different statistical population regarding occupation and the departments measured based on the type of work environment, the type of

Table 4. Comparison of the Level of Humor Between ICU and Medical-Surgical Nurses Based on Demographic Characteristics^a

| Variable | ICU | Statistical Test and P Value | | | Medical-Surgical | Statistical Test and P Value | |
|---|----------------|------------------------------|-------|----------------|------------------|------------------------------|-------|
| | | T ^b | P | Z ^c | | T ^b | P |
| Age, y | | 1.22 | 0.23 | | | 0.75 | 0.46 |
| 22 - 40 | 118.83 ± 21.85 | | | | 110.16 ± 23.35 | | |
| > 40 | 113.47 ± 19.56 | | | | 105.34 ± 24.73 | | |
| Sex | | 0.77 | 0.45 | | | 0.78 | 0.44 |
| Female | 117.13 ± 21.53 | | | | 108.88 ± 22.85 | | |
| Male | 126.67 ± 4.04 | | | | 113.56 ± 27.19 | | |
| Marital status | | 2.27 | 0.02 | | | - 0.44 | 0.66 |
| Single | 124.87 ± 17.95 | | | | 108.43 ± 26.48 | | |
| Married | 114.82 ± 21.85 | | | | 110.33 ± 21.38 | | |
| Education | | 0.75 | 0.45 | | | 1.95 | 0.054 |
| Associate degree | 125.25 ± 14.5 | | | | 135.33 ± 2.98 | | |
| BS and higher | 117.09 ± 21.5 | | | | 108.92 ± 23.39 | | |
| Position | | | 0.03 | - 2.18 | | | |
| Regular nurse | 116.2 ± 21.72 | | | | - | | |
| Head nurse | 130.1 ± 9.8 | | | | - | | |
| Work experience in the current department, y | | 1.56 | 0.12 | | | -1.88 | 0.06 |
| ≤ 10 | 118.78 ± 22.09 | | | | 108.59 ± 23.69 | | |
| > 20 | 110.86 ± 16.1 | | | | 125.57 ± 11.19 | | |
| Work experience, y | | 3.16 | 0.002 | | | - 0.05 | 0.96 |
| ≤ 10 | 123.54 ± 21.27 | | | | 109.49 ± 23.99 | | |
| > 10 | 111.61 ± 19.83 | | | | 109.73 ± 22.55 | | |
| Neuropsychiatric disease | | 1.34 | 0.19 | | | | |
| Yes | 124.5 ± 22.33 | | | | - | | |
| No | 116.42 ± 21.1 | | | | - | | |
| Death of a close relative during the last six months | | - 0.36 | 0.72 | | | -1.9 | 0.06 |
| Yes | 114 ± 28.12 | | | | 99.95 ± 30.14 | | |
| No | 117.53 ± 21.11 | | | | 111.24 ± 21.87 | | |

^aValues are expressed as mean ± SD.^bIndependent t-test.^cMann-Whitney U test.

clients, and their relationship with them.

In explaining the results obtained in the current study, we can say that the level of death anxiety and obsession will increase in nurses working in intensive care units and medical-surgical departments due to contacting with malignant and dying patients. We believe patients who cannot communicate effectively with the nurse and patients whose lives depend on the devices and the constant care of the nursing staff are a source of stress and death anxiety. However, the difference in working environments re-

garding the type of patients, the difference in the incidence of mortality, and the type of activity in intensive care units can affect the death obsession of nurses (23), and it may be the reason why ICU nurses are more obsessive than medical-surgical nurses are.

In the current study, the mean humor score was 117.37 ± 21.31 in ICU nurses and 109.56 ± 23.47 in medical-surgical nurses. In addition, the mean humor score of ICU nurses was significantly higher than that of medical-surgical nurses, which was inconsistent with the results of

Table 5. Comparison of Death Anxiety Level Between Medical-Surgical and ICU Nurses Based on Demographic Characteristics^a

| Variable | ICU | Statistical Test and P Value | | Medical-Surgical | Statistical Test and P Value | |
|---|---------------|------------------------------|------|------------------|------------------------------|------|
| | | T ^b | P | | T ^b | P |
| Age, y | | -1.68 | 0.1 | | 0.37 | 0.72 |
| 22 - 40 | 29.43 ± 10.5 | | | 26.54 ± 11.48 | | |
| > 40 | 33.29 ± 12.58 | | | 25.34 ± 13.4 | | |
| Sex | | -0.65 | 0.52 | | 0.62 | 0.55 |
| Female | 30.59 ± 11.26 | | | 26.12 ± 11.57 | | |
| Male | 26.34 ± 7.51 | | | 27.95 ± 12.54 | | |
| Marital status | | -0.95 | 0.35 | | 0.76 | 0.45 |
| Single | 28 ± 11.88 | | | 27.37 ± 11.74 | | |
| Married | 31.1 ± 10.94 | | | 25.73 ± 11.67 | | |
| Education | | -0.9 | 0.37 | | -0.18 | 0.86 |
| Associate degree | 25.5 ± 3.0 | | | 25.33 ± 4.62 | | |
| BS and higher | 30.8 ± 11.74 | | | 26.61 ± 12.43 | | |
| Position | | 1.58 | 0.12 | | | |
| Regular nurse | 31.13 ± 11.79 | | | - | | |
| Head nurse | 25.1 ± 7.43 | | | - | | |
| Work experience in the current department, y | | -0.87 | 0.38 | | 0.6 | 0.55 |
| ≤ 10 | 30.19 ± 11.93 | | | 26.75 ± 12.61 | | |
| > 20 | 32.62 ± 9.85 | | | 23.86 ± 4.26 | | |
| Work experience, y | | -1.84 | 0.07 | | -0.44 | 0.66 |
| ≤ 10 | 28.61 ± 10.22 | | | 26.26 ± 11.29 | | |
| > 10 | 32.49 ± 12.52 | | | 27.32 ± 14.47 | | |
| Neuropsychiatric disease | | 1.0 | 0.32 | | | |
| Yes | 33.29 ± 13.7 | | | - | | |
| No | 30.1 ± 10.82 | | | - | | |
| Death of a close relative during the last six months | | -0.87 | 0.39 | | 1.64 | 0.11 |
| Yes | 26.2 ± 3.04 | | | 35.5 ± 15.73 | | |
| No | 30.67 ± 11.37 | | | 25.68 ± 10.76 | | |

^aValues are expressed as mean ± SD.^bIndependent t-test.

Naderi et al. (23). In the results of the mentioned study, there was no significant difference in the humor score between the nurses working in different departments of the hospital. In describing the results of the mentioned study and the reason for the contradiction, we can say that the social pressure caused by the organization or administration atmosphere, the specific training to communicate with patients and other clients, and the rules and regulations governing a social environment can be effective in such characteristics and features. The hospital is not an exception, too. Hence, there was no difference between nurses regard-

ing humor (23).

In describing the results of the present study, it can be said that people with high humor level have a particular ability to solve the problem (8). It can be said that due to the high level of critical situations in intensive care units compared to other medical-surgical departments, nurses use resilience and humor to solve these problems and reduce their stress.

The results also showed that there was no significant relationship between gender and humor level of ICU and medical-surgical nurses, and men were more humorous.

Table 6. Correlation Between Death Anxiety, Death Obsession, and Humor in Medical-Surgical and ICU Nurses

| Variable | Death Anxiety | | Death Obsession | | Humor | |
|------------------------|---------------|-----------|-----------------|-----------|---------|-----------|
| | General | Intensive | General | Intensive | General | Intensive |
| Death anxiety | | | | | | |
| r ^a | 1 | 1 | 0.37 | - | - | 0.29 |
| P | | | 0.001 | - | - | 0.002 |
| Death obsession | | | | | | |
| r ^a | - | 0.45 | 1 | 1 | -0.04 | - |
| P | - | 0.001 | | | 0.64 | |
| Humor | | | | | | |
| r ^a | -0.08 | - | - | 0.13 | 1 | 1 |
| P | 0.36 | - | - | 0.17 | | |

^aPearson's correlation coefficient.

The reason for this contradiction can be the difference in the research population regarding age and occupation. There was also no significant relationship between education level and humor level of ICU and medical-surgical nurses, and university students were more humorous than other students were. The reason for this contradiction may be a cultural difference regarding humor and the use of humor in the educational system.

There was no significant relationship between death obsession and gender in the current study, which was in line with the results of Thabet and Abdolla, and there was no significant relationship between death obsession and gender (29). In the present study, there was no correlation between the death obsession and the work experience of nurses. In Dadfar and Lester's study, there was no relationship between the work experience of nurses and the death obsession (21).

No relationship was found between the death anxiety score and gender in the nurses of the study departments that was not consistent with the results of Thabet and Abdolla (29). The reason for this contradiction can be the use of different questionnaires for measurement of anxiety, different perspectives about death, and the sample size. There was no significant relationship between the anxiety score and age of ICU and medical-surgical nurses. The results were inconsistent with the results of Thabet and Abdolla (29). Therefore, the death anxiety score increased with an increase in age. The reason for these contradictions can be different sample size, different measurement tools, religious differences, a different viewpoint about death and life expectancy among Iranians, Indians, and Palestinians. In the present study, there was no significant relationship between marital status and death anxiety. Moreover, there was no significant correlation with the work experi-

ence of ICU and medical-surgical nurses, which was consistent with the study of Dadfar and Lester (21) and inconsistent with the study of Thabet and Abdolla (29). The reason for this contradiction may be the difference in the work experience of nurses and the different measuring tools for death anxiety. In addition, there was no significant relationship between education level and death anxiety. However, the results of Thabet and Abdolla showed an increase in death anxiety with an increase in nurses' education (29). This difference can be related to the difference in the educational system regarding creating a vision of death and life expectancy.

In the present study, the lack of cooperation of some nurses due to the crowded departments was one of the limitations of the study. The level of death anxiety and obsession was also self-reported, which may have been reported less than the actual rate and the researcher had no control over it.

5.1. Conclusions

The results of the current study showed that the levels of death anxiety, death obsession, and humor were significantly higher in ICU nurses than in medical-surgical nurses. It is suggested that nurses who play a central role in the healthcare system promote their knowledge of death and coping strategies to reduce their death anxiety and obsession. Because the different work environment regarding light, sound, and referrals and the type of activity and dealing with patients could affect mental health issues of nurses, improving the environment of the intensive care units is recommended to reduce the anxiety level the nurses. Further studies are required to measure the facilitating and confounding factors of death obsession and humor in the nursing community to improve the nurse-

patient relationships, identify, and then reduce psychological problems of nurses in intensive care units.

Acknowledgments

We appreciate the nurses who participated in this study.

Footnotes

Authors' Contribution: Mansour Arab: Study concept and design, administrative, technical, and material support. Nabiollah Heydarpour: Acquisition of data. Ahmadreza Sayadi: Analysis and interpretation of data and statistical analysis. Seyed Hamid Seyed Bagheri: Drafting of the manuscript and critical revision of the manuscript for important intellectual content and study supervision.

Conflict of Interests: No conflict of interests is reported.

Ethical Considerations: The current research was conducted by obtaining the ethical code No. IR.KMU.REC.1395.566 from Kerman University of Medical Sciences. The Research Deputy of Kerman University of Medical Sciences funded the research. Some explanations were made concerning the optional presence and withdrawal of subjects. In addition, the nurses were assured that the collected information was confidential and would be used only for research and provision of better strategies.

Funding/Support: None declared.

References

- Seyed Bagheri SH, Dehghan M, Alavi SH, Iranmanesh S, Khoshab H. Burst out of the dead land by the help of spirituality: A case study of living with blindness and cancer. *J Relig Health*. 2017;**56**(3). doi: [10.1007/s10943-016-0284-x](https://doi.org/10.1007/s10943-016-0284-x).
- Nia HS, Lehto RH, Ebadi A, Peyrovi H. Death anxiety among nurses and health care professionals: A review article. *Int J Community Based Nurs Midwifery*. 2016;**4**(1):2-10. [PubMed: [26793726](https://pubmed.ncbi.nlm.nih.gov/26793726/)]. [PubMed Central: [PMC4709813](https://pubmed.ncbi.nlm.nih.gov/PMC4709813/)].
- Seyed Bagheri SH, Iranmanesh S, Rayyani M, Dehghan M, Tirgari B, Hosseini SH. Post-traumatic stress and growth among CPR survivors in the southeast of Iran. *Int J Adolesc Med Health*. 2018. doi: [10.1515/ijamh-2017-0138](https://doi.org/10.1515/ijamh-2017-0138). [PubMed: [29332015](https://pubmed.ncbi.nlm.nih.gov/29332015/)].
- Seyed Bagheri SH, Rayyani M, Iranmanesh S, Dehghan M, Tirgari B, Hosseini SH. Growth: A journey from experience to higher perception among Iranian Muslim CPR survivors. *J Relig Health*. 2018. doi: [10.1007/s10943-018-0614-2](https://doi.org/10.1007/s10943-018-0614-2). [PubMed: [29679187](https://pubmed.ncbi.nlm.nih.gov/29679187/)].
- Jonasen AM, O'Beirne BR. Death anxiety in hospice employees. *OMEGA J Death Dying*. 2016;**72**(3):234-46. doi: [10.1177/0030222815575007](https://doi.org/10.1177/0030222815575007).
- Abdel-Khalek A, Lester D. Optimism and pessimism in Kuwaiti and American college students. *Int J Soc Psych*. 2006;**52**(2):110-26. doi: [10.1177/0020764006062092](https://doi.org/10.1177/0020764006062092).
- Martin RA, Puhlik-Doris P, Larsen G, Gray J, Weir K. Individual differences in uses of humor and their relation to psychological well-being: Development of the humor styles questionnaire. *J Res Pers*. 2003;**37**(1):48-75. doi: [10.1016/S0092-6566\(02\)00534-2](https://doi.org/10.1016/S0092-6566(02)00534-2).
- Lurie A, Monahan K. Humor, aging, and life review: Survival through the use of humor. *Social Work in Mental Health*. 2015;**13**(1):82-91. doi: [10.1080/15332985.2014.884519](https://doi.org/10.1080/15332985.2014.884519).
- Mawsley RH, Verazin EJ, Bersch ES, Crowley MC, DePhillips SB, Perry JR. The relationship between humor and physical therapist students' anxiety. *J Phys Ther Educ*. 2007;**21**(1):70-5. doi: [10.1097/00001416-200701000-00010](https://doi.org/10.1097/00001416-200701000-00010).
- Tanay MA, Roberts J, Ream E. Humour in adult cancer care: A concept analysis. *J Adv Nurs*. 2013;**69**(9):2131-40. doi: [10.1111/jan.12059](https://doi.org/10.1111/jan.12059). [PubMed: [23215893](https://pubmed.ncbi.nlm.nih.gov/23215893/)].
- Tanay MA, Wiseman T, Roberts J, Ream E. A time to weep and a time to laugh: Humour in the nurse-patient relationship in an adult cancer setting. *Support Care Cancer*. 2014;**22**(5):1295-301. doi: [10.1007/s00520-013-2084-0](https://doi.org/10.1007/s00520-013-2084-0). [PubMed: [24346848](https://pubmed.ncbi.nlm.nih.gov/24346848/)].
- Boerner M, Joseph S, Murphy D. The association between sense of humor and trauma-related mental health outcomes: Two exploratory studies. *J Loss Trauma*. 2017;**22**(5):440-52. doi: [10.1080/15325024.2017.1310504](https://doi.org/10.1080/15325024.2017.1310504).
- Aghajani M, Valiee S, Tol A. Death anxiety in intensive care units and general anxiety. *Iran J Nurs*. 2010;**23**(67):68-59.
- Rohi M, Dadgari F, Farsi Z. [Death anxiety in nurses working in critical care units of AJA hospitals]. *Military Caring Sci*. 2015;**2**(3):150-7. Persian. doi: [10.18869/acadpub.mcs.2.3.150](https://doi.org/10.18869/acadpub.mcs.2.3.150).
- Peters L, Cant R, Payne S, O'Connor M, McDermott F, Hood K, et al. Emergency and palliative care nurses' levels of anxiety about death and coping with death: A questionnaire survey. *Australas Emerg Nurs J*. 2013;**16**(4):152-9. doi: [10.1016/j.aenj.2013.08.001](https://doi.org/10.1016/j.aenj.2013.08.001). [PubMed: [24199900](https://pubmed.ncbi.nlm.nih.gov/24199900/)].
- Bennett MP, Lengacher CA. Humor and laughter may influence health. I. History and background. *Evid Based Complement Alternat Med*. 2006;**3**(1):61-3. doi: [10.1093/ecam/nek015](https://doi.org/10.1093/ecam/nek015). [PubMed: [16550224](https://pubmed.ncbi.nlm.nih.gov/16550224/)]. [PubMed Central: [PMC1375238](https://pubmed.ncbi.nlm.nih.gov/PMC1375238/)].
- Mohammadzadeh A, Najafi M. The prediction of death obsession according to religiosity orientations: Role of sex. *J Clin Psychol*. 2010;**2**(3):65-72.
- Templer DI. The construction and validation of a death anxiety scale. *J Gen Psychol*. 1970;**82**(2d Half):165-77. doi: [10.1080/00221309.1970.9920634](https://doi.org/10.1080/00221309.1970.9920634). [PubMed: [4394812](https://pubmed.ncbi.nlm.nih.gov/4394812/)].
- Tomas-Sabado J, Gomez-Benito J. The Spanish form of the death depression scale. *Percept Mot Skills*. 2003;**96**(1):49-53. doi: [10.2466/pms.2003.96.1.49](https://doi.org/10.2466/pms.2003.96.1.49). [PubMed: [12705509](https://pubmed.ncbi.nlm.nih.gov/12705509/)].
- Alinia KR, Dousti Y, Dehshiri GR, Heydari MH. [Humor styles, subjective well-being, and emotional intelligence in college students]. *J Iran Psychol*. 2009;**5**(18). Persian.
- Dadfar M, Lester D. Death concern and death obsession in Iranian nurses. *Psychol Rep*. 2015;**116**(3):704-9. doi: [10.2466/12.13.PRO.116k30w5](https://doi.org/10.2466/12.13.PRO.116k30w5). [PubMed: [26030202](https://pubmed.ncbi.nlm.nih.gov/26030202/)].
- Kim K, Yong J. [Death anxiety and burnout levels among nurses working in a cancer hospital]. *Korean J Hospice Palliat Care*. 2013;**16**(4):264-73. Korean. doi: [10.14475/kjhpc.2013.16.4.264](https://doi.org/10.14475/kjhpc.2013.16.4.264).
- Naderi F, Bakhtiar PS, Shokouhi M. The comparison of death anxiety, optimism and sense of humor among female nurses. *Woman Culture*. 2010;**1**(3):41-50.
- McCreadie M, Payne S. Humour in health-care interactions: A risk worth taking. *Health Expect*. 2014;**17**(3):332-44. doi: [10.1111/j.1369-7625.2011.00758.x](https://doi.org/10.1111/j.1369-7625.2011.00758.x). [PubMed: [22212380](https://pubmed.ncbi.nlm.nih.gov/22212380/)]. [PubMed Central: [PMC5060733](https://pubmed.ncbi.nlm.nih.gov/PMC5060733/)].
- Abdel-Khalek AM. Death obsession in Egyptian samples: Differences among people with anxiety disorders, schizophrenia, addictions, and normals. *Death Stud*. 2002;**26**(5):413-24. doi: [10.1080/07481180290087384](https://doi.org/10.1080/07481180290087384). [PubMed: [12046617](https://pubmed.ncbi.nlm.nih.gov/12046617/)].
- Abdel-Khalek AM, Lester D. Death obsession in Kuwaiti and American college students. *Death Stud*. 2003;**27**(6):541-53. doi: [10.1080/07481180302881](https://doi.org/10.1080/07481180302881). [PubMed: [12814132](https://pubmed.ncbi.nlm.nih.gov/12814132/)].

27. Mohammadzadeh A, Najafi M. The comparison of death anxiety, obsession, and depression between Muslim population with positive and negative religious coping. *J Relig Health*. 2018. doi:[10.1007/s10943-018-0679-y](https://doi.org/10.1007/s10943-018-0679-y). [PubMed: [30056484](https://pubmed.ncbi.nlm.nih.gov/30056484/)].
28. Abdel-Khalek AM. Death obsession in Arabic and Western countries. *Psychol Rep*. 2005;**97**(1):138-40. doi: [10.2466/pr0.97.1.138-140](https://doi.org/10.2466/pr0.97.1.138-140). [PubMed: [16279317](https://pubmed.ncbi.nlm.nih.gov/16279317/)].
29. Thabet AM, Abdalla T. Death anxiety and obsessional death among university Palestinian students. *Clin Exp Psychol*. 2018;**4**(178):14-6. doi: [10.4172/2471-2701.1000178](https://doi.org/10.4172/2471-2701.1000178).